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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/884,541	06/19/2001	John A. Sollars JR.	2056A	3491

7590 11/18/2003

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EXAMINER

ENGLISH, PETER C

ART UNIT	PAPER NUMBER
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3616

DATE MAILED: 11/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

SW

Office Action Summary	Application No. 09/884,541	Applicant(s) SOLLARS JR., JOHN A.	
	Examiner Peter C. English	Art Unit 3616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 and 34-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-32 and 34-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 06 October 2003 has been entered.

Specification

2. The specification is objected to because of the following informalities:

In the brief description of Fig. 3A (see the amendment filed on 06 October 2003), "200" should be inserted after "layout". Note that reference number 200 was added to Fig. 3A by the proposed drawing correction filed on 21 February 2002.

Appropriate correction is required.

3. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

The specification fails to state that the woven in joints form an inflatable portion having more than four interior sides (claim 32, lines 15-16; claim 40, line 13).

Claim Rejections - 35 USC § 112

4. Claims 10-22, 25 and 36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 10, at line 15, the term "said...internal flow barrier" lacks proper antecedent basis. The examiner suggests: in claim 10, at line 15, change "internal" to "interior"; and in claims 11 and 16-22, at line 2, change "internal" to "interior".

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In claims 12 and 25, at lines 1-2, the term "said box structures" lacks proper antecedent basis. The examiner suggests: in claim 12, at line 1, change "10" to "11"; and in claim 25, at line 1, change "23" to "24".

In claim 36, at lines 2-3, the term "said extended box configurations" lacks proper antecedent basis. The examiner suggests: at line 3, change "configurations" to "configuration".

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-4, 6-13, 15-26, 28-32 and 34-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haland et al. (GB 2,297,950) in view of Buchner et al. (US 3,792,873) and Thornton et al. (US 5,098,125). Haland et al. discloses an air bag cushion comprising a woven fabric bag having a face portion formed by a first fabric layer, a rear portion formed by a second fabric layer, and woven in joints which define flow barriers between the first and second layers. The fabric layers are interwoven to form the woven in joints. See Figs. 1 and 6-8, and page 6, lines 4-15. As shown in Figs. 7 and 8, the fabric layers are not connected to one another between the joints. Because the woven in joints have both a longitudinal dimension and a lateral dimension (see Figs. 1 and 6-8), they are considered to extend in both the warp direction and the weft direction. As shown in Figs. 1 and 6, the woven in joints consist "essentially" of straight line segments. As shown in Fig. 6, the woven in joints within the interior of the cushion extend from the bottom edge of the cushion to a position adjacent to but spaced from the top edge of the cushion so that inflation fluid from an inflator 51 can flow to all of the chambers defined by the woven in joints. As also shown in Fig. 6, woven in joints located along the top and bottom of the cushion form closed edges of the cushion. Fig. 2 shows an embodiment in which the woven in joints form "islands". The woven in joints are considered to

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be "box structures" and "multiple cornered", as is broadly claimed, since these terms are not defined in the claims.

Haland et al. lacks fabric layers made of polyester or nylon yarns, and woven in joints separated by at least two yarns and no more than eight yarns. As shown in Fig. 3, Buchner et al. teaches an air bag cushion comprising a woven fabric bag 1 having a face portion formed by a first fabric layer 5a, a rear portion formed by a second fabric layer 5b, and woven in joints 6 which define flow barriers between the first and second layers 5a, 5b. As shown in Fig. 4, the first fabric layer 5a is defined by warp yarns 21 and weft yarns 24, and the second fabric layer 5b is defined by warp yarns 22 and weft yarns 25. The fabric layers 5a, 5b are interwoven to form the woven in joints 6 (see column 3, lines 36-55 and column 4, line 65 through column 5, line 14). As shown in Fig. 4, the woven in joints are separated by eight yarns. The fabric layers 5a, 5b are made of polyester or nylon (see column 5, lines 15-17). Thornton et al. also teaches an air bag cushion having interwoven fabric layers made of polyester or nylon yarn (see column 3, lines 49-50). The fabric layers are interwoven in such a way as to eliminate yarn floats (see column 4, lines 48-68). The cushion is woven on an "electronic or computer-controlled dobby or harness regulator" (see column 5, lines 9-12).

From these teachings of Buchner et al. and Thornton et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Haland et al. by forming the fabric layers of polyester or nylon yarns because these materials provide the cushion with the required strength and durability; and by separating the woven in joints by at least two yarns and no more than eight yarns in order to provide the inflatable areas between the joints with a sufficient volume to protect an occupant, while minimizing the likelihood of joint failure.

With respect to claims 7 and 29, it would have been obvious to reduce the separation of the joints to no more than four yarns in order to reduce the size of the inflatable areas between the joints. Further, such a modification involving a mere change in size is generally recognized as being within the level of ordinary skill in the art.

With respect to claims 9, 15 and 31, it would have been obvious to provide the airbag cushion with a rectangular shape in order to adapt the bag for use in a particular environment. Further, such a modification involving a mere change in shape is generally recognized as being within the level of ordinary skill in the art.

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With respect to claims 21 and 22, it would have been an obvious matter of design choice to provide the woven in joints with an alternate shape in order to give the cushion a specific inflated shape. Further, such a modification involving a mere change in shape is generally recognized as being within the level of ordinary skill in the art.


7. Claims 5, 14 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haland et al. in view of Buchner et al. and Thornton et al. as applied to claim 1 above, and further in view of Kitamura (US 5,336,538). The Haland et al., Buchner et al. and Thornton et al. combination lacks a porosity blocking coating on the cushion. Kitamura teaches a woven fabric cushion 1 including a porosity blocking coating 2 (see column 4, lines 48-51). From this teaching of Kitamura, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify Haland et al. by providing the cushion with a porosity blocking coating in order to prevent the cushion from deflating too rapidly when struck by a vehicle occupant. Further, such a coating can be used to prevent hot gases from exiting portions of the cushion which contact the occupant.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter C. English whose telephone number is 703-308-1377. The examiner can normally be reached on Monday through Thursday (7:00 AM - 5:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul N. Dickson can be reached on 703-308-2089. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9326.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.


Peter C. English
Primary Examiner
Art Unit 3616
11/17/03

pe
17 November 2003